

# Distributed Wind Deployment: Dairy Farm

Rural agricultural installation of two 100-kW wind turbines



The Heritage Dairy in Yuma, Colorado is an example of an agricultural facility that features unobstructed wind from the dominant wind direction and utilizes two Northern Power Systems wind turbines. *Photo by Charles Newcomb*

**Project description:** Located on the plains in rural Colorado, this family farm uses a distributed wind system to offset electricity used by energy-intensive dairy farming. Their site is ideal for distributed wind development because there are minimal obstacles to block the prevailing winds coming from the west. (Buildings shown are to the east and south, not the dominant wind direction.) The turbines were interconnected on long distribution lines and grid infrastructure upgrades were completed as part of the project.

**Year of installation:** October 2016

**Type of customer:** Agricultural, dairy farm

**Utility:** Y-W Electric Association is a cooperative that provides electric service to most of Yuma and Washington Counties in Colorado. A board vote was required to approve interconnection (required for projects over 25 kW).

**Estimated production:** ~250,000 kWh per turbine per year

**Actual production:** 247,029 kWh (Turbine 1) and 229,363 kWh (Turbine 2)

**Percent of electricity offset:** 50–66%

## In Their Words

*As an experienced installer, why do you think this installation will be successful?*

“At the end of the day, the project matched all the interests of the involved parties: the distribution co-op, and an end-user that has the electric load and the financial wherewithal to harvest the wind. You need to have good equipment and good engineering. All the interests need to be aligned.”

- Paul Roamer, President of Ethos Distributed Solutions

*What was the driving force behind your decision to install a wind turbine, and what do you think will make the project successful?*

“I first started thinking about installing a wind project because I thought that it would appeal to my customers if some of the energy needs to produce my agricultural products were met by renewable energy. I have been pleased to discover that in fact there is also a strong business case for investing in smaller renewable energy.”

- Erick Farmer, Heritage Dairy, project owner



The two Northern Power wind turbines each produce nearly 240,000 kWh on an annual basis. *Photo by Trevor Atkinson*